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PATENT
Attorney Docket N° 01-709

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Michael S. Gatov
Serial N° : 10/033,090
Filed : October 25, 2001
Group Art Unit : 3749
Examiner : Boles, D.
For : UNIFORM AIRFLOW DIFFUSER

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

CERTIFICATE OF MAILING 37 C.F.R. § 1.8

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ReNea D. Berggren

DATED: May 19, 2004

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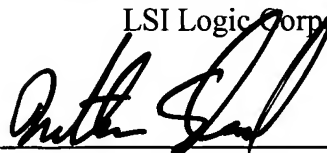
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APPELLANT'S BRIEF ON APPEAL

This is an appeal from the final rejection of the Office dated October 21, 2003 rejecting Claims 1-25. Applicant respectfully notes that only Claims 1-10, 12-15, and 17-30 are pending. Further, while not mentioned on form PTO-326 (Office Action Summary) Claims 25-30 were rejected in the text of the Action. Applicant will treat 25-30 accordingly.

(1) REAL PARTY IN INTEREST

The real party in interest is LSI Logic, the assignee of the entire interest.

(2) RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any related appeals or interferences.

(3) STATUS OF CLAIMS

The application was filed on October 25, 2001 with twenty (21) claims, of which Claims 1, 13, and 21 are independent.

All of the claims (Claims 1 through 21) were rejected in the Office Action dated June 19, 2001.

In Appellant's Response dated August 21, 2002, arguments were made indicating the patentability of the claims as filed over the proffered references and new Claims 22 through 25 were added.

All of the claims (Claims 1 through 25) were rejected in the Office Action of December 3, 2002.

In Appellant's Response, dated February 27, 2003, arguments were made indicating the patentability of the claims as filed over the proffered references and Claims 4, 6, 7, 9, 11, 17-19, 21, and 24-25 were amended.

All of the claims (Claims 1 through 25) were rejected in the Office Action dated May 8, 2003.

In Appellant's Response dated August 8, 2003, claims 11 and 16 were canceled, Claims 26 through 30 added, and arguments were made indicating the patentability of the claims as filed over the proffered references.

The Examiner made a final rejection of Claims 1-25 (sic) in the Office Action dated October 21, 2003.

In Appellant's Response to Final Rejection dated December 22, 2003, arguments were made indicating the patentability of the claims as filed over the proffered references. The status of the claims is as follows:

Claims allowed: none

Claims objected to: none

Claims rejected: Claims 1-25 (sic) 1-10, 12-15, and 17-30.

(4) STATUS OF AMENDMENTS AFTER FINAL

No amendment to the claims has been submitted.

(5) SUMMARY OF INVENTION

The present invention is directed generally to a system and a method for providing substantially laminar air flow in a process chamber (112) of a semiconductor production device. The system and method of the present invention allow for substantially uniform air flow (as may be generally observed in FIG. 1) such that particles (e.g., particles generated during wafer processing) do not become entrained in the air and thereby deposit on wafers thereby reducing efficiency due to particulate contamination. Instant Specification, Page 2, paragraph [0004] and Page 6, paragraph [0022]. A diffuser (102) is connected to a plenum such that an initial flow of air entering the plenum from a blower is reduced over the flow of air entering the process chamber through the air diffuser (102) thus reducing the airflow.

(6) ISSUES

Issue I

Whether the Examiner has properly rejected Claims 1 through 4, 8, 9, 22, 23, and 25 through 28 under 35 U.S.C. § 102(b) as being anticipated by Ziemer et al. United States Patent 4,554,766 (hereinafter Ziemer).

Issue II

Whether the Examiner has properly rejected Claim 21 under 35 U.S.C. § 102(b) as being anticipated by Lindestrom United States Patent 3,726,204 (hereinafter Lindestrom).

Issue III

Whether the Examiner has properly rejected Claims 5, 10, 29, and 6 under 35 *U.S.C. §103(a)* as being obvious over Ziemer in view of Larsson United States Patent 6,080,060 (hereinafter, Larsson). Claim 6 being rejected over the combination Ziemer in view of Larsson further in view of Horneff.

Issue IV

Whether the Examiner has properly rejected Claims 7, 24, and 30 under 35 *U.S.C. §103(a)* as being obvious over Ziemer in view of Chang et al. United States Patent 5,788,567 (hereinafter Chang).

Issue V

Whether the Examiner has properly rejected Claims 12 and 20 under 35 *U.S.C. §103(a)* as being obvious over Ziemer in view of Horneff et al. United States Patent 3,824,909 (hereinafter Horneff).

Issue VI

Whether the Examiner has properly rejected Claims 13 thorough 15, 19, 17, and 20 under 35 *U.S.C. §103(a)* as being obvious over Wurst in view of Linderstrom. Claims 17 and 20 being rejected over the combination Wurst, Linderstrom, and Horneff. Claim 18 being rejected over the combination Wurst, Linderstrom, and Chang

(7) GROUPING OF CLAIMS

It is the Appellant's intention that the rejected claims be grouped in accordance with the Examiner's rejections as follows:

Group I should comprise Claims 1-4, 8, 9, 22, 23, and 25-28; Group II should comprise Claim 21; and Group III should comprise Claims 5, 10, 29, and 6, Group IV should comprise 7, 24, and 30, Group V should comprise Claims 12 and 20, Group VI should comprise Claims 13 thorough 15, 18, 19, and 17. Groups I, II, III, IV, V, and VI

are believed to be separately patentable and the claims in each grouping do not rise or fall together with the claims of the other groupings and are separately patentable in accordance with *MPEP §1206*.

(8) ARGUMENTS

Group I

Regarding Claims 1-4, 8, 22, 23, and 25-28, the Examiner rejected the claims comprising Group I under 35 U.S.C. §102(b) as being anticipated by Ziemer. Appellant disagrees. The Examiner has failed to correctly ascertain and set forth the differences between the claimed invention and the prior art. Accordingly, the rejection is untenable and should be reversed. Further, the Examiner has failed to establish a *prima facie* case of anticipation with respect to the Ziemer reference.

In order for a *prima facie* case of anticipation to exist, [A]n anticipating reference must describe the patented subject matter *with sufficient clarity and detail* to establish that the subject matter existed and that its existence *was recognized by persons of ordinary skill in the field of invention.*” *ATD Corp.v. Lydall, Inc.*, 48 USPQ.2d 1321, 1328 (Fed. Cir. 1998) citing *In re Spada*, 15 USPQ.2d 1655, 1657 (Fed. Cir. 1990). Emphasis added. The Ziemer reference discloses a ceiling construction for clean rooms. Ziemer, Abstract. The Examiner asserted that “In the field of microchip production, process chamber and clean room are synonyms.” Final Action Page 5, first full paragraph. This assertion is incorrect. First, no reference was cited for the asserted equivalence between a clean room and a semiconductor manufacturing device process chamber. For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art. In this instance, the Examiner has not offered any reason why one of skill in the art would equate a process chamber with a clean room. As the Office is aware, [A]lthough this disclosure requirement presupposes the knowledge of one skilled in the art of the claimed invention, that presumed knowledge does not grant a license to read into the

prior art reference teachings that are not there. *Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d 1461, 43 USPQ 2d 1481, 1490 (Fed. Cir. 1997). Applicant disagreed and challenged the asserted equivalence as improper Official Notice. Response to Final Action dated December 22, 2003. Examiner failed to respond. Second, Ziemer fails to anticipate the present invention because it does not place those of skill in the art in possession of the invention. Ziemer does not exhibit a “substantial representation of the patented improvement” of the presently claimed invention as required for a reference to enable the pending claims. *Seymour v. Osborne*, 78 U.S. 516, 555 (1870). In the present case, the Examiner has failed to carry the burden under 35 U.S.C. §102 of how a ceiling structure for a room anticipates a process chamber, such as included in a semiconductor manufacturing machine, airflow system as recited in the claims comprising Group I. As such a *prima facie* case of anticipation has not been shown and the rejection is untenable.

Further, the Ziemer reference fails to teach all the limitations of a process chamber airflow system as arranged in claims comprising Group I. Instead, Ziemer teaches pressure chamber 20 (asserted as the plenum) which is not connected to the air diffuser. Instead, the pressure chamber 20 is connected to the intermediate ceiling structure 14. Ziemer, Col. 4, lines 11-12 and FIG. 1. As the Board is aware, “anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.” *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)). In light of the foregoing, reversal of the rejection is respectfully requested.

Group II

Regarding Claim 21, the Examiner rejected Claim 7 under 35 U.S.C. §102(b) as being anticipated by Lindestrom. Appellant disagrees. Appellant respectfully submits that the Examiner has failed to establish a *prima facie* case of anticipation over the

Lindestrom reference. Group II is separately patentable as the claims defining Group II recite a method of establishing a substantially laminar airflow which is patentable over the other groups defining systems.

As the Office is aware, the Examiner carries the burden of going forward under 35 U.S.C. §102.

We think the precise language of 35 U.S.C. 102 that “a person shall be entitled to a patent unless,” concerning novelty and unobviousness, clearly places a burden on the Patent Office which requires it to produce the factual basis for its rejection of an application under sections 102 and 103. . . *In re Warner*, 379 F.2d 1011, 154 U.S.P.Q. 173, 178 (C.C.P.A. 1967), cert denied, 389 U.S. 1057 (1968).

The Examiner’s entire rejection is “Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Lindestrom (3,726,204). See fig. 1. and col. 2, lines 46-61.” Final Action dated October 21, 2003, Page 2, second paragraph.

Neither FIG. 1 of the Lindestrom reference, nor anywhere in the *Linderstrom* reference is a method of uniformly dispersing air in a process chamber disclosed expressly or inherently as recited in claim 21. Lindestrom discloses a device for generating a clean zone, in a room, by generating an area in which the airflow creates an air curtain or zone in which the airflow forces particles from the zone and prevents the ingress of dust and bacteria. Lindestrom, Abstract.

Lindestrom fails to teach a method of providing substantially laminar airflow in a process chamber including generating an airflow with an initial cross-section, disposing an air diffuser with a plurality of uniformly spaced holes wherein the total cross sectional area of the plurality of holes is less than the initial cross-sectional area so as to uniformly provide airflow to the process chamber. For argument sake, if one were to compare the flows between plate 8 (*Lindestrom*, FIG. 1) with the flow through plate 9 (*Lindestrom*, FIG.1) which seems to disclose a cross-sectional area difference, this would ignore that the initial flow of air is generated in zone 6 (*Lindestrom*, FIG. 1). Lindestrom is silent

regarding the cross-sectional difference between the airflow in channel 6 (initial cross-section) with that occurring through plate 8 (taken to be the cross-sectional area of the diffuser). It appears that the Examiner is attempting to forward an inherency argument. As the Office is aware, “[i]nherency. . . may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient.” *In re Oelrich*, 666 F.2d 578,581, 212 USPQ 323, 326 (C.C.P.A. 1981) *citing Hansgirk v. Kemmer*, 102 F.2d 212, 214, 40 USPQ 665, 667 (C.C.P.A. 1939). Emphasis added. In light of the foregoing, reversal of the rejection is respectfully requested.

Group III

Group III comprising Claims 5, 10, 29, and 6, stand rejected under 35 U.S.C. §103(a) as being obvious over Ziemer in view of Larsson. Appellant disagrees. Appellant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to Ziemer in view of Larsson. Group III is separately patentable in regards to Groups I, II, IV, V, and VI inasmuch as the Examiner incorrectly relies on Ziemer in view of Larsson to reject the claims. Group III is separately patentable due to the inclusion of the additional limitations of “a filter disposed between the blower and plenum”, “a chamber suitable for microchip production”, and “a diffuser having holes of varying cross-section” over the claims comprising the other groups. Therefore, in accordance with *MPEP 1206*, the claims do not stand or fall together and are separately patentable.

First, neither Ziemer, nor Larsson, on the whole, disclose a process chamber airflow system for use in microchip production, instead, both are directed to clean rooms. As such, both Ziemer and Larsson implement common to building construction.

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as whole would have been obvious. *M.P.E.P. §2141.02 citing Stratoflex, Inc. v.*

Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983).
Emphasis original.

Ziemer teaches that the filter is to be disposed between a pressure chamber 20 and a distribution chamber 23. Ziemer, FIG. 1. This is not the present invention. Larsson fails to correct the deficiencies in Ziemer, because Larsson fails to point out any rationale for the asserted location. Thus, while a bodily incorporation isn't required under 103(a), the Larsson reference must indicate why it would be obvious to one of ordinary skill in the art at the time the invention was made to make the asserted modification. Obviousness cannot be established by combining the teaching of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined only if there is some suggestion or incentive to do so. *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 221 USPQ 929 (Fed. Cir. 1984). The Larsson reference does not provide this teaching. Larsson fails to teach, suggest or otherwise indicate that the recited filter location was obvious to one of ordinary skill in the art. In fact, Larsson teaches away from disposing a filter between the blower/plenum as Larsson on the whole discloses utilizing a series of filters 4a, 4b, and 4c as a side of the pressure chamber. As the Federal Circuit has cited "A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." *M.P.E.P.* §2141.02, citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Neither the Ziemer reference, nor the Larsson reference, when considered on the whole, disclose the present invention. Further, the Examiner has failed to substantiate that either the Ziemer or Larsson systems (both disclosing clean rooms) necessarily teach or make obvious a process chamber as recited in the claims. As such, the Examiner has failed to carry the burden of establishing a *prima facie* case of obviousness. Reversal of the rejection is respectfully requested.

Group IV

Group IV comprising Claims 7, 24, and 30, stand rejected under 35 U.S.C. §103(a) as being obvious over Ziemer in view of Chang. Appellant disagrees. Appellant submits that the Examiner has failed to establish a *prima facie* case of obviousness. Group IV is separately patentable over Groups I, II, III, V, and VI inasmuch as the claims comprising the group recite an air diffuser being formed of static dissipating material.

The Examiner has failed to offer any motivation from the prior art to combine Ziemer, Class 52/28 (Static structures/artificial illumination means), with Chang, Class 454/187 (Ventilation/Clean Room). As the Office is aware, “[I]t is necessary to ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification.” *In re Lahu*, 747 F.2d 703, 223 USPQ 1257, 1258 (Fed. Cir. 1984). As the Examiner has not cited any teaching in either of the cited references or any other reference for the proposition of combining the references, this appears to be a classic case of hindsight. Thus, the Examiner has failed to carry the burden of proving a *prima facie* case of obviousness. M.P.E.P. §2142.

Further, the Examiner asserted Chang as teaching a diffuser formed of static dissipating material. Applicant disagrees. Nowhere, does Chang disclose an air diffuser formed of static charge dissipating material. Rather, the passage, cited by the Examiner, states “The apparatus preferably further utilizes an ionizing grid placed between the chassis and the guiding panel, a grounded static-discharge line secured to the guiding panel, or an antistatic solution applied to the guiding panel for preventing buildup of static charges.” *Chang*, Col 2, lines 20-24. Chang fails to teach a diffuser formed from static charge dissipating material. None of the structures in the cited passage or anywhere in the Chang reference have a diffusing capacity as asserted by the Examiner. As disclosed in *Chang*, an ionization grid appears to be a web of metal wire having no appreciable ability to diffuse or spread out the airflow over the diffuser. In light of the

foregoing, the Examiner has failed to carry the burden of proving a *prima facie* case of obviousness. Reversal of the rejection is respectfully requested.

Group V

Group V comprising Claims 12 and 20 stand rejected under 35 U.S.C. §103(a) as being obvious over Ziemer in view of Horneff. Applicant disagrees. Claims 12 and 20 of Group V are separately patentable as the claims include the limitation of a range of airflow holes of from 0.125 inches to 0.5 inches. Therefore, in accordance with *MPEP 1206*, the claims do not stand or fall together and are separately patentable from Groups I, II, II, IV, and VI.

Regarding Group V, the Examiner rejected the pending claims under 35 U.S.C. § 103(a) noting “Horneff et al. discloses the presence of a range of airflow holes being between 0.125” and 0.5”. See col. 3, lines 36-53.” Applicant disagrees. *Horneff* discloses “[p]anel hole sizes may vary from 0.04 inch diameter to about 0.125 inch diameter. . .”. *Horneff*, Col. 3, lines 40-41. Emphasis added. The asserted diameter range disclosed in *Horneff* is of a much smaller diameter than is recited in Claims 12 and 20. Further, use of the phrase “to about” indicates the patentee’s own skepticism regarding the use of holes having a diameter of approximately 0.125 inch. Thus, the patentee has disclosed a lower range which may not even touch (overlap) on the claimed range of between 0.125 inches to 0.5 inches in order for a *prima facie* case of obviousness of ranges to exist. M.P.E.P. §2144.05. As a *prima facie* case of obviousness does not exist (i.e., the ranges do not overlap) the Examiner failed to establish how one of skill in the art would have expected the same properties from the reference range and the claimed range. M.P.E.P. §2144.05. In light of the foregoing, reversal of the rejection is respectfully requested.

Group VI

Group VI comprising Claims 13 through 15, 19, and 17 stand rejected under 35 U.S.C. §103(a) as being obvious over Wurst in view of Linderstrom. Claim 17 is rejected over the combination Wurst, Lindestrom, and Horneff. Applicant disagrees. Claims 13 through 15, 19, and 17 of Group VI are separately patentable as the claims recite a process chamber air diffuser including a plate air diffuser with a plurality of holes sufficient to cause the plate to experience a first and a second pressure which is lower than the first. Therefore, in accordance with *MPEP 1206*, the claims do not stand or fall together and are separately patentable from Groups I, II, II, IV, and V.

Regarding the pending rejection under 35 U.S.C. §103(a) the Examiner is correct that Wurst fails to disclose a plate having a first and a second side with a plurality of apertures sufficient to cause the first and second sides to experience different pressures. The Examiner is incorrect that *Lindestrom* corrects this deficiency. As the Office is aware, "A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." *M.P.E.P.* §2141.02, citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Wurst discloses a transfer device which is "open on a side open on the side opposite the fan unit" *Wurst*, Col. 3 lines 22-23. Therefore, Wurst does not teach a process chamber as recited in the claims forming Group VI. Lindestrom fails to correct this deficiency as Lindestrom discloses a device for generating a clean zone, in a room, by generating an area in which the airflow creates an air curtain or zone in which the air flow forces particles from the zone and prevents the ingress of dust and bacteria. *Lindestrom*, Abstract. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Ryoka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). See also *In re Wilson*, 165 U.S.P.Q. 494 (C.C.P.A. 1970). Further, as Wurst utilizes several fan units 10 (FIG 3) to achieve "approximately laminarly downwards flow" there is no motivation to combine Wurst with Lindestrom. *Wurst*, Col. 3, lines 22-25. As the Office is aware,

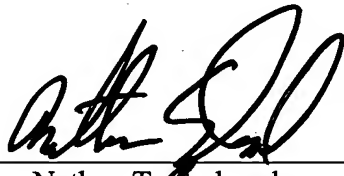
"[I]t is necessary to ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification." *In re Lahu*, 747 F.2d 703, 223 USPQ 1257, 1258 (Fed. Cir. 1984). In the present case, the Examiner has offered no suggestion or teaching within the references suggesting the asserted modification. Thus, the foregoing appears to be a classic case of hindsight. In light of the foregoing, reversal of the rejection is respectfully requested.

CONCLUSION

For the above reasons, it is respectfully requested that in each of the rejections discussed herein, the Examiner has failed to meet the burden in establishing a *prima facie* basis for the rejections. Accordingly, reversal of all outstanding rejections is earnestly solicited.

Respectfully submitted,
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CLAIMS

1. A process chamber airflow system, comprising:
a blower suitable for creating an initial flow of air suitable for circulation in a process chamber;
a plenum capable of receiving the initial flow of air; wherein the plenum is connected to the blower and the process chamber; and
an air diffuser, connected to the plenum, wherein the air diffuser contains a plurality of holes, such that the initial flow of air through the plenum is reduced.
2. The process chamber airflow system of claim 1, wherein the air diffuser further comprises:
a means for securing the air diffuser to the plenum.
3. The process chamber airflow system of claim 1, wherein the reduction in airflow is sufficient to cause the initial airflow to be distributed uniformly through the plurality of holes in the air diffuser.
4. The process chamber airflow system as claimed in claim 3, wherein the air diffuser eliminates initial airflow turbulence entering the plenum from an air filter.
5. The process chamber airflow system of claim 1, further comprising a filter disposed between the blower and the plenum.
6. (Previously Amended) The process chamber airflow system as claimed in claim 5, wherein individual holes, included in the plurality of holes, have varying cross-sectional areas.
7. The process chamber airflow system of claim 1, wherein the air diffuser is formed of static charge dissipating material.

8. The process chamber airflow system of claim 1, wherein the air diffuser's plurality of holes are uniformly distributed throughout the air diffuser.

9. The process chamber airflow system of claim 1, wherein the air diffuser is disposed on one side of a generally cubic chamber of a semiconductor production device.

10. The process chamber airflow system of claim 1, wherein the chamber is suitable for utilization in microchip production.

12. The process chamber airflow system of claim 1, wherein the plurality of holes range in size from 0.125 inches to 0.5 inches.

13. An air diffuser for utilization in a process chamber, comprising a means for securing the air diffuser to the process chamber; and a plate with a first side and a second side, connected to the securing means, wherein the plate includes a plurality of holes penetrating the first and the second sides; wherein the plurality of holes are uniformly dispersed throughout the plate; wherein the plurality of holes are sufficient to cause the first side of plate to experience a first pressure and the second side to experience a pressure lower than the first pressure when the plate is disposed in an airflow.

14. The air diffuser of claim 13, wherein the plurality of holes has a total cross-sectional area lower than that of an inlet supplying the airflow.

15. The air diffuser of claim 13, wherein the change in pressure between the first and the second sides of the plate is sufficient to distribute the airflow through the entire plurality of holes.

17. The process chamber airflow system as claimed in claim 13, wherein individual holes, included in the plurality of holes, have varying cross-sectional areas.

18. The air diffuser of claim 13, wherein the plate is formed of static charge dissipating material.

19. The air diffuser of claim 13, wherein the air diffuser diffuses air with a substantially laminar flow.

20. The air diffuser of claim 13, wherein the plurality of holes range in size from 0.125 inches to 0.5 inches.

21. A method of providing substantially laminar airflow in a process chamber, comprising:
generating an initial flow of air with an initial cross-sectional area;
disposing an air diffuser with a plurality of uniformly spaced hole in the airflow, wherein
a total cross-sectional area of the plurality of holes is less then the initial cross-sectional area;
creating a back-pressure of air due to the reduction in the cross-sectional area through the plurality of holes;
dispersing a portion of the initial airflow uniformly across the air diffuser; and
providing uniform airflow through the plurality of holes included in the air diffuser, to the process chamber.

22. A process chamber airflow system, comprising:
a blower suitable for creating an initial flow of air suitable for circulation in a process chamber;
a plenum capable of receiving the initial flow of air; wherein the plenum is connected to the blower and the process chamber; and

an air diffuser including a plurality of holes therein connected to the plenum, the cross-sectional area of the air diffuser is greater than the cross-sectional area of the received initial flow of air into the plenum;

wherein the initial air flow into the plenum is greater than the flow of air through the plurality of holes in the air diffuser.

23. The process chamber airflow system of claim 22, wherein the reduction in airflow is sufficient to cause the initial airflow to be distributed uniformly through the plurality of holes in the air diffuser.

24. The process chamber airflow system of claim 22, wherein the air diffuser is formed of static charge dissipating material.

25. The process chamber airflow system of claim 22, wherein the air diffuser diffuses air, such that contaminate particles are removed from the chamber by the chamber airflow.

26. A semiconductor production device, comprising:

a generally cubic process chamber for producing semiconductors; and

an airflow system mounted generally on a side of the process chamber, said airflow system including:

a blower suitable for creating an initial flow of air suitable for circulation in the process chamber;

a plenum capable of receiving the initial flow of air; wherein the plenum is connected to the blower and the process chamber; and

an air diffuser, connected to the plenum, wherein the air diffuser contains a plurality of holes, such that the initial flow of air through the plenum is reduced,

wherein the initial air flow into the plenum is greater than the flow of air through the plurality of holes in the air diffuser.

27. The semiconductor production device of claim 26, wherein the reduction in airflow is sufficient to cause the initial airflow to be distributed uniformly through the plurality of holes in the air diffuser.
28. The semiconductor production device of claim 27, wherein the air diffuser eliminates initial airflow turbulence entering the plenum from an air filter.
29. The semiconductor production device of claim 26, further comprising a filter disposed between the blower and the plenum.
30. The semiconductor production device of claim 26, wherein the air diffuser is formed of static charge dissipating material.